

HORSE-SHOEING,

AS IT IS DONE,

AND AS IT OUGHT TO BE.

A LETTER ADDRESSED TO THE

President & Members of the St. John Agricultural Society.

WITH PLATES AND ILLUSTRATIONS.

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Published By Order of the Board.

FREDERICTON, N. B.:

PRINTED BY JAMES HOGG, REPORTER OFFICE.

1854.

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HORSE-SHOEING, As it is, and as it ought to be.

BY M. A. CUMING, V. S.

To the President and members of the St. John Agricultural Society,

GENTLEMEN,—In addressing you on the particular point in the treatment of your horses placed at the head of this letter, I may be allowed to guard myself against the imputation of obtrusiveness by referring to the following extract from the original application of the Society by which I was induced to come to this city and Province. In writing to Professor Dick, of Edinburgh, to recommend a competent Veterinary Surgeon for St. John, the Corresponding Secretary of your Society said :—" It is greatly desired by the members of the Society that the Surgeon should have in connection with his establishment or under his charge, a *Forge* where horses could be shod in a proper manner. At present we are very badly off in this respect, there being but few smiths with whom a good horse can be safely trusted."

This was written in the summer of '51, and my own observation after coming here in '52 fully bore out the truth of the statement. It was not necessary to take off shoes or examine feet, or enter into any other minute kind of inspection to find out the evil. The long Donkey like hoofs every where seen, and the number of horses lame from corns, contractions, ringbones, spavins, sprained tendons and interfering were sufficient evidence that the Society had not instructed its Secretary to write as he did without abundant cause.

Such being the case there is need for little further proof, that the horses here are not generally shod as they should be; nor is it required that I should urge the benefit of a better system. The adage "no foot no horse" is equally applicable here as where it was first used. In this country where horses are hard driven, and too slight generally for their work, it is of the greatest importance that as few defects should exist in the plan of shoeing them, and as many advantages be combined as the state of the shoeing art will admit of, and it is to further this desirable end that the following remarks are meant. In writing my ideas therefore on horse-shoeing, I have

no wish that they should be looked upon as a complete or formal treatise on the subject. So many of these already having been published by men eminent in the art as to supply to the scientific or enquiring reader all the information that books can give. My object is of a less pretending but more practical character, namely, to point out the errors most commonly fallen into as the thing is done among ourselves, the effects of these errors, and their remedy.

The first thing that takes the notice of any one accustomed to see horses well shod, on looking at the feet of almost all he meets here, is the preposterous length of the toes, so strange indeed did this feature seem to me at first, that I doubted if the internal parts of the foot could be the same as those I had been used to see elsewhere, or if nature had not in a freak made them different here from what they are in other places. Subsequent inspection however has shown me that this is not the case, that nature forms the feet of horses here the same as every where else, and that the absurd and often ludicrous forms we see them fashioned into is only the work of the shoeing smith. When the foot is unshod and the horse at liberty, the growth of the hoof is barely sufficient to provide for the constant wear and tear of the sole and toe; and consequently no part is either wanting or superabundant. But when the horse is put to work on hard roads, and to stand in dry stables, the foot becomes inadequate to the wear, and to save it we put an iron shoe on. This shoe prevents the wear without checking the growth of the hoof, and to compensate for this, every time the shoe is off the foot should be brought as near as possible to the form and size that nature gave it. In the unshod colt the greatest diameter of the hoof is across the sole. This is especially the case in the fore foot, and it contributes materially to the usefulness of the animal that it should continue so through life.

The function of the fore leg is mainly that of supporting the weight of the body, head and neck, and of transferring that weight forward from point to point at the time the animal is in motion. In performing this latter action its mechanical bearing is much the same as that of a spoke in a carriage wheel. It is in fact a lever, in which, to give increased speed, the power acts at a disadvantage, the fulcrum or fixed point being at the long end of the lever, while the power and weight are near each other at the short. This long portion or arm of the lever is the leg from the elbow to the ground, the toe being the fixed point over which the body is raised, and hence any addition made to the length of the toe, has the same effect upon the horse as the placing the block before the wheel of a

carriage has on it. It acts against the muscular power of the animal as used in the raising and carrying forward of his weight, and if ridden, of the weight of his rider, and though only requiring a small additional effort at each step tells materially in a days journey. Every one the least a judge of horses can tell of the advantage of having them short below the knee, and is ready to despise as misshapen any one that has the reverse defect. But there seem few (hereabout at least) who have got so far as the consecutive idea, namely, that to cultivate an additional inch of unnecessary toe, is just the same as to put that much to the length of the bone below the knee, in fact for the horse, worse, as the addition is made at the point of greater disadvantage.

In the hind leg, though the functions of the part be different, the effects of a long toe are equally an evil, if any odds worse. The main use of the hind leg is the propulsion of the body forward, and when hauling of the load also. In effecting this the leg from the hock to the ground is a lever also of the second class. The power is the muscles whose tendons are inserted into the point of the hock. The resistance is concentrated in the *tibia* or bone of the leg where it forms the hock joint, and the fixed point of the lever is the point of the toe upon the ground. From this it is plain on the simplest mechanical evidence, that anything added to the length of the toe, is so much leverage placed against the animals power of hauling, and consequently that he must either do less work, or else exert himself more in the doing of it.

Mechanical disadvantage to the horse in the performance of his work however, is but one of the evils following the long toes in this country. Another equally great often arises when he is standing at rest.

Every one knows what is meant by a horse being "sprung in the knees." For the information of those who are curious to know how this condition is produced, I will explain one of its causes. The bones of the foot and pastern of the horse do not stand perpendicularly above each other, but slope backwards, a considerable portion of the animals weight resting on the tendons that pass down the back of the leg, and hence the greater the slope the more the strain the tendons have to bear. If we put a horse to stand with his head up hill, more exertion is needed to sustain himself than if standing on a level. The reason is that the bones of the foot and pastern are thereby placed more obliquely, and more of his weight is thrown upon the tendons and muscles, and thus a wearied horse, if left to himself always feeds with his head down hill; but we add

to the slope of the foot and pastern the same by adding to the length of the hoof and shoe as by placing the horses head up hill, and with greater permanency of effects as we leave him no power to relieve himself. Often the two conditions are conjoined, the toes are imperiously long and the horse is confined nine-tenths of his time in a sloping stall. Here the muscular exertion of sustaining his weight soon becomes irksome, he shifts from one foot to another but finds it only a temporary relief. The muscles connected with the tendons that pass down the back part of the leg to the foot soon begin to relax till the weight falls on the ligamentous straps behind and below the knee. Then the bones of the pastern and foot become still more sloping, and to sustain his body perpendicularly above his feet, and still more to relax the muscles, the knee bulges out in front to a line with the projecting toe. This at first occurs only now and then, when the horse is wearied and forgetful, his postures becoming natural and proper when roused up. By-and-by however it becomes a habit, and the causes being permanent and constant in their action the effects soon become the same, and we have for life the horse "sprung in the knees."

Many a valuable horse, tottering on the brink of this condition has been saved and brought back to usefulness by having his feet put in a proper shape, and a run at grass, or a loose box to stand in allowed him, while others on whom the torture of long toes and sloping stalls was persevered with have become permanently useless.

Another evil, resulting from the length at which the toes are commonly left, is interfering. The horse, finding the long projection in front of his foot as so much leverage acting to his disadvantage, gradually gets into a habit of shifting it, by raising himself from one or the other of the quarters. This is still more the case when, in addition to the long toe left on the hoof, a small round knob of steel is set into the point of the shoe, as if in contempt of all that nature teaches. With these absurd contrivances placed between his weight and the ground that supports it, it is next to impossible for a horse to raise himself evenly upward and forward, and hence the number that one way or another interfere. If in raising his weight from the ground, the pressure be upon the inside quarter of the foot, then the thick part of the pastern is thrown inward, in the way of being struck by the upper edge of the hoof of the other side. If the cant be the other way, and the outside quarter raise the weight, the inside edge of the shoe is thrown round and upward, and runs the risk of cutting with it the opposite leg. Even

when the horse from having a naturally good gait escapes both these evils, still he is not free from evils caused by this shape of shoe.

The fore foot of the horse, as nature makes it, has no such projection in front and downward as that which the Smiths here give it, but rather the reverse. The sole surface at the toe is commonly broken off and notched back at the middle, so that the pressure, when the foot strikes the ground or the animal is raising his weight, is distributed over the whole front of the foot. In accordance with this the coffin bone, which fills the natural cavity of the hoof, has the same turned up and notched back form; in England, France, and on the Continent of Europe generally, wherever Veterinary Schools exist, and scientific attention is given to shoeing, this natural form of foot is more or less followed in the shape of the shoe, and the animal has preserved to him, along with the protection from wear which the shoe gives, the position of tread for which nature has constructed the other mechanical arrangements of his organs of motion. Why it is not so here is partially perhaps due to the buttris for cleaning out the foot when it is shod, as it is impossible with this antiquated instrument to bring the hoof to the proper shape in all its parts; but it is more so to want of study on the part of those who shoe, of the structure of the foot, its uses and the relation existing between it and the other motive organs, the bones, tendons, and ligaments of the limbs.

Let me describe for an instant the way the horse is commonly shod here, the foot an inch longer at least (often more) in hoof than it should be, and brought out to a point instead of being rounded back, on this point is placed in addition to the unnatural length of the shoe a round button like knob of steel with perhaps only a fourth part of an inch of level bearing to rest upon the ground. When the ground is soft it is all well, as this projection penetrates till the flat of the shoe comes to bear the weight, and all the extra labour the horse has is that of raising himself an inch or two more than he needs at every step, and digging up an unnecessary quantity of gravel. But the case differs when the horse treads on anything impenetrable, as a piece of stone or smooth hard rock. Then the difficulty of raising his weight is added to that of balancing himself while doing so upon the pivot by which the point of his toe is terminated. The horse not being furnished by nature with muscles of abduction and adduction in the fore limbs (that is muscles for drawing the legs outward or inward from or to the body) has but little power of balancing himself from falling sideways. The instant he begins to raise his weight upon

the narrow base of less than half an inch on which the smith has propped him, the tendency is for him to topple over, which he does till the side or quarter of the shoe either outside or inside takes the ground and gives him farther support. This however is not done without a cant or jerk to all the joints of the foot. True, it is the work of an instant and the horse recovers himself, and goes on before we can almost see it is done. But then the same occurs a hundred, it may be a thousand times a day, when the roads are rocky or dry and stony, canting, twisting and jerking the coffin pastern and fetlock joints at every step, and yet, we daily meet with those who gravely wonder how the ringbones, swelled fetlocks, sprains, and spavins, are all produced. The wonder rather is, considering the improper and unnaturally shaped feet and shoes, that there are any sound.

Another of the errors in shoeing which I found current when I came here was the want of a tip or projection turned up, on the point of the shoe to for an abutment against the toe of the hoof. It seemed to me that in respect of this the smiths had turned the shoe wrong side up, giving a tip downwards where nature never designed it to be, and denying one upwards where it was essentially wanted. As from the long toes so from this also the fore feet are the greatest sufferers. I have already mentioned the function of the fore limbs to be mainly the support of the weight, and its transference forward from point to point during the motion of the animal. In doing this a considerable degree of concussion is inflicted upon the foot every time it strikes the ground. The direction of this concussion is neither right downward nor right forward, but between the two, partaking of the horizontal motion of the body of the animal along the road, and of the perpendicular direction of the descent of his weight.

Every one knows the additional power of resisting or sustaining concussion and weight any fibrous substance has if struck or pressed in the direction of the fibres besides if acted on in any other. The hoof of the horse is composed of an infinite number of dense fibres, strongly agglutinated together; and to enable the foot with the greatest advantage to meet and support the concussion there is when it strikes the ground, these fibres are every one of them so placed in the unshod foot as to receive the shock directly on their ends. In addition to this, the front part of the hoof where the force of the concussion is greatest is twice or thrice as thick and strong as the side and heels, its slope indicating exactly the direction of the descent of the horses weight.

Now all this thickening and strengthening and sloping at the toe of the fore foot is not without an obvious design, which is to enable it to receive without injury the shock upon it when the horse is thrown forcibly forward, as in leaping, galloping, or even hard trotting, especially if down hill, and by turning up a tip on the shoe as an abutment for the toe to press against when it strikes the ground we make both shoe and foot to act together in harmony, we save the shoe from being knocked off, and at the same time promote the natural action of the foot. In shoeing without this simple expedient, we frustrate the design which nature evidently had in making the toe so strong, and throw the concussion this strength was designed to meet upon the nail holds of the weaker parts of the foot, sides and heels. These have not only to support the weight of the shoe but also to bear the force of the foot striking the ground; and the shoe being found from these two causes more inclined to come off than is wished, resource is had to an extra amount of nailing, not only at the toes, where from the thickness and want of spring in the hoof it is harmless but round the quarters and even to the heels where by its pinching and fettering effects it is productive of the worst of consequences; corns, contraction and founder being its daily fruits.

No disease is more certainly a consequence of shoeing than corns, and the number of horses lame from this hercissal most beyond belief. I have met with them in feet where they had caused lameness for years and been shod over all the time without discovery. In such a case we may blame the shoer for oversight but not for wilful mis-doing; but what shall we say when a corn is discovered, and to some relieved by the knife, and then the shoe refixed on the very plan by which the evil was originally produced, yet such things happen not once or twice, but daily.

Two causes mainly contribute to the production of corns; nailing of the shoe too far back by its preventing the spring of the foot is one. The other is unequal pressure of the shoe upon the sole and heels; when both are combined corns are next to inevitable.

A reason or at least a pretext for heel nailing I have already noticed. The extent to which it is carried and the uniformity of its occurrence show that those who produce it never entertain a doubt of its propriety, nor a suspicion that the hoof of the horse is an elastic and organized structure contracting and expanding alternately at every step and consequently in proportion to the extent to which it is fixed and fettered.

The unequal pressure between the hoof and shoe which leads to corns and other hurtful consequences may arise either from the shoe

being improperly made or the foot insufficiently pared out. It is rare that we meet with a shoe here on which an attempt has been made to form a seat for the sole, more rare still that the attempt is successful. The seat when tried to be made is commonly only a concave from given to the entire surface of the shoe next the hoof instead of extending only as far outward as the sole, and leaving a level rest for the edge of the crust, such shoes should be called scooped rather than seated and are worse to make a horse go with, than even those flat made.

But the cause of corns is often to be found in the way the foot is prepared. I have already adverted to the buttris as being instrumental in the production of long toes. It is equally so in that of corns. Of this no better proof is needed than the disappearance of the one simultaneous with disuse of the other; this has happened generally in Britain within the last thirty or forty years, and particularly in the practice of Regimental shoeing.

Professor Coleman of the Veterinary College of London, writing in 1809 says: "There are very few horses that are not attacked with corns. This is so common a disease that nine hundred horses out of a thousand have it." Mr. Percival, Veterinary Surgeon to the First Life Guards, in his work on lameness in horses published last year says: "That faulty shoeing is the chief and predominant cause of corns cannot anywhere receive more satisfactory demonstration than in the Army. Corns and quittors and contracted feet were in former days as rife in the Cavalry as in other places, whereas at the present day these diseases are all but unknown to Veterinary Surgeons of Regiments; and all is owing to an amended practice of shoeing."

My own experience, if it could add anything to the above is this: during seven years practice immediately preceeding my coming here I did not meet with more than five or six cases of lameness from corns; and in a record of more than a thousand cases that I kept during a part of the time, noting them in the order which I treated them, there is only one of corns, and that a slight one. Since I came here there are few days that I do not see horses lame from this cause, although it can be but a fractional part of the evil that comes under my observation.

In blaming the buttris for producing corns and other evils, a few words of explanation is necessary. From the shape of this tool its tendency in cleaning out a foot with it, is to cut away both crust and sole, bars heels and all to one level. In fact it is hardly possible when using it to leave one part more predominant than another, especially when it is the crust and bars that should be left and the sole

removed. The hoof of the horse though strong and tough to resist internal agencies is by no means a stiff or rigid body, but springs and expands at every step, and along with this expansion the sole descends and flattens out from the weight of the horse resting on the coffin bone inside. Now if this descent of the sole be not allowed for in fitting the shoe, either by a seat worked in the shoe itself, or by cleaning out the sole to a lower level than the crust, then the sole in its descent presses on the shoe, and the sensitive part inside is squeezed between it and the coffin bone. As the heel is part of the foot in which expansion is greatest and the descent of the sole and coffin bone most, and as the angle between the bar and crust is the place from which the sole is with greatest difficulty removed, so it is in the heels that the bruising and corn producing action of bad shoeing is most to be met with. Yet I have seen on all parts of the sole round near the crust bruises caused by pressure of the sole downwards on the shoe. The way therefore in which the buttris aids in the production of corns is from its unfitness for effectually removing the more depressed parts of the unnecessary horny sole. In the hands of a person aware of how the foot should be dressed, and who will take the drawing knife and rasp to give the sole, heels, and toe the proper form, after doing the rougher part of the work with the buttris, it is an efficient and useful tool, and so long as people allow the feet of their horses to grow for six months at a time without removing the shoes, they can hardly expect it to be laid aside. Its abuse however if better understood would be easier guarded against and it is to this, rather than to its entire disease that I wish my remarks to tend.

The common way in which I have seen feet prepared and shod here is this. After removal of the old shoe the buttris is brought over the frog, bars and heels first, and these being soft and easily cut get a liberal slicing, a scoop is then taken out of the sole on each side extending nearly to the toe, and forming a uniform concave from the point of the frog to the out edge of the crust, so that when a scooped shoe is placed on it, instead of the foot and shoe presenting two level surfaces to each other, they rest upon two thin edges, and even with the level shoe it is the thin out edge only of the crust that bears the weight: this scooping out of the sides of the soles is all the implement can conveniently effect. It is not handy for rounding or shortening back the toe and so is seldom bid to do it, that part being left entire except a little out of the sole surface which rather adds than otherwise to its projecting point; neither is it available for cleaning out the sole from the angles between the heels and bars, leaving these parts

prominent to rest upon the shoe. All it can do here is to bring the parts to a uniform level, and this being done with the foot off the ground, the instant it is set down all the parts change their relative positions, and if the sole was left equally full as the crust and bars (parts designed to bear the horses weight,) it is now more so, and a week or two's work and growth brings such a degree of pressure on it as to bruise the sensitive sole underneath, rupturing some of the minute blood-vessels with which it is studded, and showing the evil that is done by the effusion of the blood through the pores of the horny sole as in the condition called corn.

The foot being prepared in this way, the shoe is fitted (so far as it gets any fitting) to its elongated and pointed form, and being turned wrong side up so far as the shape of the toe goes, it is nailed as far back towards the heels as nails can safely be driven, and the same process being repeated time after time when the shoes are removed we have the long contracted mule looking feet produced that we see daily on our streets.

A system of shoeing free from these defects is just as easy to practice, equally cheap, and productive of far more satisfactory results. The following is an outline of its most important points.

In making the shoes whether fore or hind, the elongated and pointed shape should be studiously avoided, even when from previous bad management the feet are contracted at the heels and flattened in on the sides to an extent admitting of only a partial restoration to the proper shape; still the projecting point upon the toe can be dispensed with, and a broad and solid bearing given in front. The fore shoes if they have a concave seat should have a perfectly level bearing of the breadth of the crust round the outside. The hind shoes do not need seating as the hind feet have a greater concavity and less descent of the sole than the fore. Both fore and hind shoes should have a tip or projection turned up in front as a rest for the toe to bear against in the descent of the foot, and an aid to the nails in keeping it on. The web or body of the shoe should be of a uniform thickness all around, and when heel caulks are worn they should be both one length; when only one caulking is worn the other heel of the shoe should be thickened up to the same level. When toe caulks are required either to give foot hold for heavy draught or for sharpening in winter, they should extend as far laterally as the breadth of the foot will admit, be as little prominent as may be to afford sufficient hold, be of a uniform depth from end to end, so that all parts bear equally on the ground, and have the bearing edge on the same level as a line drawn between the points of the heel caulks.

The fullering or grooving of the shoe is a useful device for securing the even punching of the nail holes and protecting the heads of the nails from wear. Beyond this I am not aware of any benefit from it, and it certainly has the disadvantage of weakening the shoe and facilitating its being worn down. In France, many parts of Britain, and in all the English Cavalry Regiments, the nail holes are simply punched and counter-sunk without any groove or fuller and have a nail suited to the size and form of the hole. The shoe made thus has a greater solidity and durability, and I have little doubt will ultimately be the form preferred. But whether fullered or not there are one or two things about the punching of the nail holes not to be overlooked. They should all be so punched that the nails may enter the wall of the hoof on its inner edge. No nail hole should ever be seen on the seating of the shoe, nor nail in any part of the edge of the sole. To do this properly requires some nicety as both the thickness and slope of the crust alter as we proceed from the toe to the heels, and it is one of the things much neglected in the making of shoes here, there being but few in which you will see a well graduated range of nail holes. A point worse managed however is the placing of the nail holes properly as regards their distance from the heels. No nail should ever be driven into the foot further back than its broadest part. This is a rule of nature's indication and she will not suffer its violation with impunity. Behind the broadest part of the hoof the spring and expansion is such that it cannot be fettered or confined without harm; yet we seldom see a shoe made here that has not one or two nails into the forbidden ground, and often they are nailed to the very heels.

As an instance: a gentleman drove a horse from Fredericton to St. John last winter who had been shod the day before leaving. He was two days on the way, and before reaching here was lame on all four feet. On taking off the shoes no special cause of lameness was found in any of the feet except the fettering effects of the nails; but these were driven to within half an inch of the heel caulks, so as to destroy entirely the natural action of the foot.

In another case a gentleman's horse in Portland had been lame from corns nobody knew how long, as the hoof was so over-grown that the corns had never been discovered. In this case the fore feet admitted of being shortened back more than an inch, and a proportional quantity taken off the sole; and the nail holes of the old shoe instead of extending only half round as they should have done, occupied more than two-thirds of the circumference from the toe to the heels.

A third instance may be mentioned. About a month ago a gentleman from Sussex brought a colt for me to see, being in the belief himself that he was foundered as he was equally lame in both fore feet. The most careful examination could detect no acute disease as a cause for his lameness, but both fore shoes were nailed on with ten nails each, five on each side, and back almost to the heels as if intended not to need removal during the animal's natural life.

Since this was begun to be written, the following case occurred in town as if to impress more strongly the necessity of exposing the system referred to. A dray horse was lame on a fore foot and was taken to a forge and had a new shoe put on. Three or four days afterwards (the lameness in the mean time having increased) I was called to see him. I found the cause of lameness to be a suppurated corn in one of the heels, the inflammation from which had run so high as to break out at the top of the hoof between the hair and bone. The cause of the corn was equally obvious. The shoe had no toe tip to steady it on the foot, but instead had a large one turned up at each heel, so as completely to fix the foot and make its lower part rigid as if in a vice. On enquiry I learned that a shoe of the same kind had been on before the recent shoeing, and had no doubt produced the corn and lameness for which he was reshod; while the more complete fixture of the new shoe caused the inflammation and suppuration I was called to treat.

These are not singular instances; similar ones are occurring almost every day, and anything approaching to a well made shoe is the exception rather than the rule in this country.

In the preparing of the foot for the shoe there is also as I have already noticed, room for much amendment on the way it is practised here. The back parts of the hoof having less growth and more wear on them than the fore, seldom require anything removed except it be a little from the outside heel. The frog should only be touched to remove any cut or ragged portions. The bars, those angular ridges that be between the frog and heels should be left at their full strength, and the sole between them and the wall of the heel thinned down so far at least as to prevent the possibility of its descending on the shoe. The sole at the toe where it has the protection of the shoe should be thinned out till it can be made to yield to the pressure of the thumb. The crust should be shortened back in front, a notch taken out for the reception of the upturned tip, and its whole lower surface where it rests upon the shoe made plain and level. This is a most important point. The weight of the shoe is supported by the attachment of the coffin bone to the inside wall of the hoof. The lamina

by which the connection is formed permitting of a very perceptible amount of motion of the parts, it is consistent with this that the rest of the hoof upon the shoe should be greatest at the inner edge of the crust rather than the outside so as to give the weight the most direct support. In the scooped out form of shoe and foot, where the bearing of the one upon the other is by the extreme out edges, this is widely departed from, and the effects are seen in the broken, twisted, and contracted edges and heels produced. When the fore shoes are made without a seat as in the case of having the side next the ground concaved, the same holds good with respect to the flattening and leveling of the crust, but the sole requires to be more cleaned out so as to prevent its descent upon the shoe; for doing this as well as shortening back and forming the toe, the drawing knife will be found a far fitter tool than the buttris. In applying the latter to the foot, the heels, frog and bars, are what first present themselves and stand most in the way of its cutting edge; with the knife, the toe and sole are the parts easiest to cut, the back of the foot being out of the way rather: and it is owing to this perhaps more than anything else, that in the hands of those who shoe by rote only, without rule or reason for what they do, the one tool may be taken as the emblem of a good plan of shoeing, and the other the reverse. It is quite possible to make a bad shaped foot with a drawing knife or a good shaped one with a buttris, but it is more convenient with each tool to do the reverse.

Few general directions can be given about the driving of the nails. Different kinds of feet requiring different depths of holes. None of the holes should be so far to the inside of the wall as to press on the sensitive parts, nor so near the out edge as to split or break the hoof; and as a mark of fair and uniform driving the nail points should come out all about one height. The rasp should be used to finish off with, but should be applied but sparingly to the upper part of the hoof, and wherever it has gone the surface should be coated over with a composition of greasy and resinous matters to stop its pores and prevent its drying and cracking on the surface, this should be done occasionally on the feet of all horses going much in snow and wet.

In submitting these remarks to the members of the St. John Agricultural Society I have two objects mainly in view: the first is to remind them that in the same letter in which their Secretary complained of the condition of horse-shoeing here and desired the aid of some one to improve it, he also said that the Society would take such person under patronage and give him all the support in their power; on the faith of these representations I have spared no expense in fitting up a forge for horse-shoeing where every improvement in the art is practiced and the errors current in the country (being known) are studiously avoided, and having done so I feel myself entitled to ask in return a share of "patronage" and "support" from the Society and its members.

But beyond this my object is to improve the condition of the art generally in the Province, and, to do this, sundry means present themselves. The first I would mention is the publication by the Society (if they think proper) of this letter and illustrations. I am aware that its statements will be new to many, to some no doubt displeasing. Those who shoe as I have described the cultivators of long toes and perpetrators of heel nailing will not like it, but this I cannot help, improvement must not keep back for them. If their modes will bear defending let them defend them, if they will not, let them give them up for better, and either way the public and themselves will profit.

A second means that suggests itself is the sending copies of this to parties at a distance where opposition need not create prejudice, and from which some of those who practice the art may come and see for themselves the advantage of plans better than their own, and learn them. A third means is altogether in the hands of the public. It is for those who care for the welfare of their horses, and like them to have all the advantages of a good shoe well put on, to send them though but once to have a trial and then to judge for themselves.

Gentlemen interested in improvement visiting St. John, though only now and then, by having their horses feet at such times put in proper shape and well made shoes put on them, might soon be the means of spreading a better system than the present to quarters not otherwise likely to be soon reached, other means might be named, any in fact by which better information could be spread, and more rational practices introduced, and we might hope soon to see the long toes disappear and with them the "sprung knees," "corny heels," "ring-bones," "contractions," and other collateral evils.

In conclusion, Mr. President and Gentlemen of the St. John Agricultural Society, it would ill become me to advertise my own claims to business by your means, where you are not interested, and to benefit as well as me: your Corresponding Secretary, in his letter to Professor Dick, to which I have already twice referred, says, "If you have any friend for whom you wish to provide comfortably, here is a favorable opportunity for now doing so." I have no wish, gentlemen, for such "provision" as is here indicated: all I ask is such a share of employment in the calling which you sought me to come here for and practice, as may enable me to live by it. Nor do I ask this without offering you, as I have endeavored to show, advantages in exchange which you can no where else obtain: but do not take this on my word, look into the matter yourselves, observe the number of horses crippled in the different ways I have named, and, if fortunate in your own having escaped, reflect that it may not be always so, that he is as liable as others to be the victim of a bad system. Ask if art and science, where these have most been cultivated, can do anything to remedy or prevent such wholesale mischief, and, if you find that they can, give them at least a trial, and do not be content to live fifty years behind the rest of the world, even in the treatment of your horses' feet.

Gentlemen, I have the honor to be,

Your most obedient servant,

M. A. CUMING, V. S.

